52. Document ID: JP [illegible] B

L4: Entry 52 of 54 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12521V
DERWENT-WEEK: 197407

TITLE: Fluorescent substance - gives orange emission by activation with electron rays

PRIORITY-DATA: 1969JP-0082183 (October 16, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 74003631 B	January 28, 1974		000	

INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003631B

BASIC-ABSTRACT:

Terbium yttrium aluminate (Tb1-xYx)3.Al5O12 , where 0 < x <0.6, is activated with cerium, whereby the Ce is not >30% of the total amt. of Tb and Y. The emission energy distribution of the fluorescent substance is the same as in cerium-activated terbium aluminate fluorescent substance, but as compared thereto, shows high luminescence. When the value of x in the compsn. >0.4, Tb acts not only as an activator but also as a mother substance so that the emission energy distribution curve and emission colour change. The prefd. calcination temp. is 1300-1500 degrees C.

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53. Document ID: JP 74003630 B

L4: Entry 53 of 54 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12520V
DERWENT-WEEK: 197407

TITLE: Fluorescent compsn mfr - contg Y activated with Te and Ce

PRIORITY-DATA: 1969JP-0082182 (October 16, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 74003630 B	January 28, 1974		000	

INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003630B
BASIC-ABSTRACT:

Yttrium aluminate (Y3Al5O12) is activat d with terbium and cerium, but is not >30 mole % w.r.t. yttrium. The cpd. is then activated with electron rays to mit a yellow green colour but with extrem ly short aft r glow. Yttrium, cerium, and terbium, oxides or oxalates obtd. by copptn. are prefd. Al, oxide, hydroxide or nitrate are prefd. When terbium >30 mole %, it acts as mother substance so that the emitted colour is different. The prefd. calcination temp. is 1200-1500 degrees C. for 2 hrs.

USE/ADVANTAGE - Isolator or switch in visible or IR spectra. High isolation is achieved and undesirable oscillation avoided. (13pp)d

[redacted]

☐ 39. Document ID: JP 74003629 B

L1: Entry 39 of 39 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12519V
DERWENT-WEEK: 197407

TITLE: Fluorescent cpd mfr - contg terbium aluminate

PRIORITY-DATA: 1969JP-0081158 (October 13, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 74003629 B	January 28, 1974		000	

INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003629B
BASIC-ABSTRACT:

Method comprises activating terbium aluminate [redacted] is produc d by mixing oxides or oxalates of terbium and cerium with oxides, hydroxides or nitrates of aluminium, and calcining in air. The amt. of cerium which is added is 0.3-0.001 mole to 1 mole of terbium. The [redacted] and an orange colour is emitted.

[redacted]

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Terms	Documents
tb$o12	39

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Previous Page Next Page

☐ 52. Document ID: JP 74003631 B

L4: Entry 52 of 54 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12521V
DERWENT-WEEK: 197407

TITLE: Fluorescent substance - gives orange emission by activation with electron rays

PRIORITY-DATA: 1969JP-0082183 (October 16, 1969)

PATENT-FAMILY:

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INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003631B

BASIC-ABSTRACT:

Terbium yttrium aluminate (Tb1-xYx)3.Al5O12 , where 0 < x <0.6, is activated with cerium, whefeby the Ce is not >30% of the total amt. of Tb and Y. The emission energy distribution of the fluorescent substance is the same as in cerium-activated terbium aluminate fluorescent substance, but as compared thereto, shows high luminescence. When the value of x in the compsn. >0.4, Tb acts not only as an activator but also as a mother substance so that the emission energy distribution curve and emission colour change. The prefd. calcination temp. is 1300-1500 degrees C.

☐ 53. Document ID: JP 74003630 B

L4: Entry 53 of 54 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12520V
DERWENT-WEEK: 197407

TITLE: Fluorescent compsn mfr - contg Y activated with Te and Ce

PRIORITY-DATA: 1969JP-0082182 (October 16, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
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INT-CL (IPC): C09K 1/68

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国際事務局

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特許協力条約に基づいて公開された国際出願

(51) 国際特許分類6
H01L 33/00

A1

(11) 国際公開番号 WO98/05078

(43) 国際公開日 1998年2月5日(05.02.98)

(21) 国際出願番号 PCT/JP97/02610

(22) 国際出願日 1997年7月29日(29.07.97)

(30) 優先権データ

特願平8/198585	1996年7月29日(29.07.96)	JP
特願平8/244339	1996年9月17日(17.09.96)	JP
特願平8/245381	1996年9月18日(18.09.96)	JP
特願平8/359004	1996年12月27日(27.12.96)	JP
特願平9/81010	1997年3月31日(31.03.97)	JP

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(81) 指定国 AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO特許 (GH, KE, LS, MW, SD, SZ, UG, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧州特許 (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI特許 (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

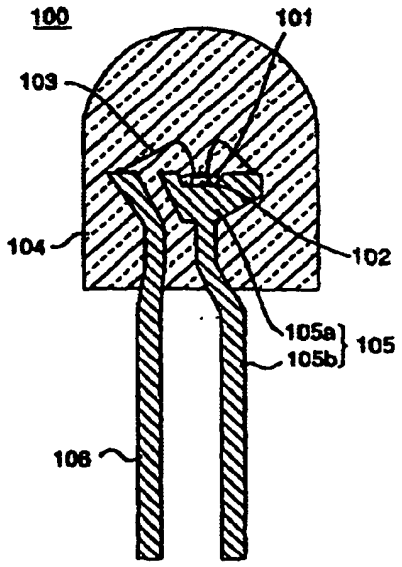
添付公開書類
国際調査報告書

(54)Title: LIGHT EMITTING DEVICE AND DISPLAY DEVICE

(54)発明の名称 発光装置と表示装置

(57) Abstract

A light emitting device provided with a light emitting element having a semiconductor light emitting layer and a photoluminescence fluorophor which absorbs part of the light emitted from the light emitting element and emits light having a wavelength which is different from that of the absorbed light. The light emitting layer of the light emitting element is composed of a nitride compound semiconductor and the photoluminescence fluorophor contains a garnet-based fluorophor activated with cerium containing at least one element selected from among the elements of Y, Lu, Sc, La, Gd, and Sm and at least one element selected from among the elements of Al, Ga and In. As a result, a white light emitting diode having high luminance and a light emitting characteristic which is not deteriorated even when the diode is used for a long period of time is obtained.



USE/ADVANTAGE - Isolator or switch in visible or IR spectra. High isolation is achieved and undesirable oscillation avoided. (13pp)d

[redacted]

☐ 39. Document ID: JP 74003629 B

L1: Entry 39 of 39 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12519V
DERWENT-WEEK: 197407

TITLE: Fluorescent cpd mfr - contg terbium aluminate

PRIORITY-DATA: 1969JP-0081158 (October 13, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 74003629 B	January 28, 1974		000	

INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003629B
BASIC-ABSTRACT:

Method comprises activating terbium aluminat[redacted] is produc d by mixing oxides or oxalates of terbium and cerium with oxides, hydroxides or nitrates of aluminium, and calcining in air. The amt. of cerium which is added is 0.3-0.001 mole to 1 mole of terbium. The f[redacted] and an orange colour is emitted.

[redacted]

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Terms	Documents
tb$o12	39

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Previous Page Next Page

52. Document ID: JP 74003631 B

L4: Entry 52 of 54 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12521V
DERWENT-WEEK: 197407

TITLE: Fluorescent substance - gives orange emission by activation with electron rays

PRIORITY-DATA: 1969JP-0082183 (October 16, 1969)

PATENT-FAMILY:

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☐ 53. Document ID: JP 74003630 B

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特願平9/81010	1997年3月31日(31.03.97)	JP

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青山特許事務所 Osaka, (JP)

(81) 指定国 AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO特許 (GH, KE, LS, MW, SD, SZ, UG, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧州特許 (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI特許 (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

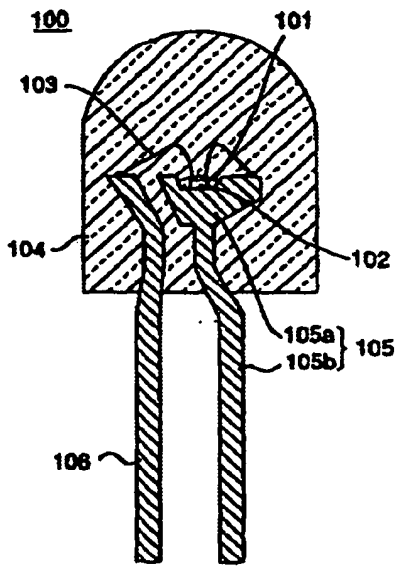
添付公開書類
国際調査報告書

(54)Title: LIGHT EMITTING DEVICE AND DISPLAY DEVICE

(54)発明の名称 発光装置と表示装置

(57) Abstract

A light emitting device provided with a light emitting element having a semiconductor light emitting layer and a photoluminescence fluorophor which absorbs part of the light emitted from the light emitting element and emits light having a wavelength which is different from that of the absorbed light. The light emitting layer of the light emitting element is composed of a nitride compound semiconductor and the photoluminescence fluorophor contains a garnet-based fluorophor activated with cerium containing at least one element selected from among the elements of Y, Lu, Sc, La, Gd, and Sm and at least one element selected from among the elements of Al, Ga and In. As a result, a white light emitting diode having high luminance and a light emitting characteristic which is not deteriorated even when the diode is used for a long period of time is obtained.



(19) Europäisches Patentamt
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(11) Publication number: 0 124 175 A1

(12) EUROPEAN PATENT APPLICATION

(21) Application number: 84200580.3

(22) Date of filing: 24.04.84

(51) Int. Cl.³: H 01 J 61/44

(30) Priority: 25.04.83 NL 8301445

(43) Date of publication of application: 07.11.84 Bulletin 84/45

(84) Designated Contracting States: AT BE CH DE FR GB IT LI NL SE

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Inventor: Berns, Everhardus Gradus, c/o INT. OCTROOIBUREAU B.V. Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL)

(74) Representative: Evers, Johannes Hubertus Maria et al, INTERNATIONAAL OCTROOIBUREAU B.V Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL)

(54) Low-pressure mercury vapour discharge lamp.

(57) A low-pressure mercury vapour discharge lamp having a very satisfactory colour rendition, ($R_{a,8} \geq 85$), a colour temperature of 2300–3300 K and a colour point on or near the Planckian curve. The lamp is provided with a luminescent layer comprising:

a. a luminescent alkaline earth metal halophosphate activated by Sb^{3+} and Mn^{2+} having a colour temperature of 2900–5000 K;

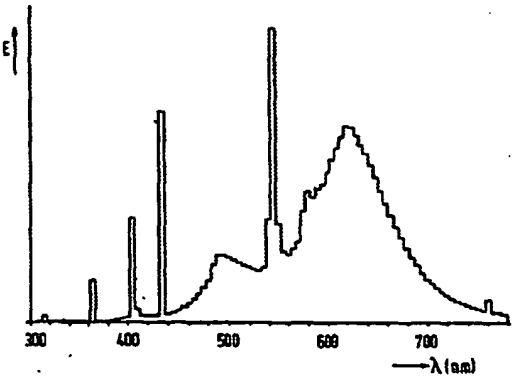
b. a luminescent material activated by Eu^{2+} with an emission maximum van 470–500 nm and a half-value width of at most 90 nm, and

c. a luminescent rare earth metal metaborate activated by Ce^{3+} and Mn^{2+}, having a fundamental lattice Ln (Mg, Zn, Cd) B_5O_{10}, in which Ln represents the elements Y, La and/or Gd, which borate has red Mn^{2+} emission.

Further, the lamp is provided with means for absorbing blue radiation having wavelengths below 480 nm. Preferably, the luminescent layer further contains:

d. a luminescent material activated by Tb^{3+} which exhibits green Tb^{3+} emission.

Besides a very satisfactory colour rendition at a low colour temperature, these lamps have a high luminous flux and a high maintenance of the luminous flux during their life.



EP 0 124 175 A1

USE/ADVANTAGE - Isolator or switch in visible or IR spectra. High isolation is achieved and undesirable oscillation avoided. (13pp)d

[redacted]

☐ 39. Document ID: JP 74003629 B

L1: Entry 39 of 39 File: DWPI Jan 28, 1974

DERWENT-ACC-NO: 1974-12519V
DERWENT-WEEK: 197407

TITLE: Fluorescent cpd mfr - contg terbium aluminate

PRIORITY-DATA: 1969JP-0081158 (October 13, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 74003629 B	January 28, 1974		000	

INT-CL (IPC): C09K 1/68

ABSTRACTED-PUB-NO: JP 74003629B
BASIC-ABSTRACT:

Method comprises activating terbium aluminate [redacted] is produc d by mixing oxides or oxalates of terbium and cerium with oxides, hydroxides or nitrates of aluminium, and calcining in air. The amt. of cerium which is added is 0.3-0.001 mole to 1 mole of terbium. The [redacted] and an orange colour is emitted.

[redacted]

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tb$o12	39

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Previous Page Next Page

USE/ADVANTAGE - Isolator or switch in visible or IR spectra. High isolation is achieved and undesirable oscillation avoided. (13pp)d

[redacted]

☐ 39. Document ID: JP 74003629 B

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Previous Page Next Page